

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A communications network arrangement providing voice over IP or voice over ATM services, the network arrangement comprising:
  - 3 a first media gateway controller configured to control a first media gateway, wherein the first media gateway controller is provided with a first operating protocol,
  - 5 a second media gateway controller configured to control a second media gateway, wherein the second media gateway controller is provided with a second, different operating protocol,[[ and]]
    - 8 a computer, and
      - 9 ~~comprising a gateway address translator executable in the computer and incorporating proxies for said first and second media gateways respectively, wherein each of the proxies in said gateway address translator is configured to receive a control message from a respective one of said first and second media gateway controllers, and in response to the control message, forward the control message to a corresponding one of the first and second media gateways provide a relay function for messaging between each of said first and second media gateway controllers and the corresponding one of the first and second gateways, and~~
        - 16 wherein the gateway address translator is configured to provide a virtual bearer function for messaging between said first and second media gateway controllers.
  - 1 2. (Currently Amended) [[A]]~~The~~ communications network arrangement as claimed in of claim 1, wherein said gateway address translator comprises ~~gateway proxies, one for each of said first and second gateways, and~~ virtual gateways, one for each of said first and second media gateway controllers, wherein the virtual gateways are configured to provide the virtual bearer function for messaging between said first and second media gateway controllers.
  - 1 3. (Currently Amended) [[A]]~~The~~ communications network arrangement as claimed in of claim 2, wherein signaling communication between said first and second media gateway controllers is provided via a signalling network.

1    4.     (Currently Amended) [[A]]The communications network arrangement ~~as claimed in of~~  
2    claim 3, wherein said signalling network comprises a Common Channel Signaling 7 network.

1    5.     (Currently Amended) [[A]]The communications network arrangement ~~as claimed in of~~  
2    claim 2 wherein said computer comprises a non-transitory machine readable storage medium  
3    storing software of said gateway address translator ~~comprises~~ software provided in machine  
4    ~~readable form on a storage medium.~~

1    6.     (Cancelled)

1    7.     (Currently Amended) [[A]]The communications network arrangement ~~as claimed in of~~  
2    claim 1, wherein at least one of said first and second media gateway controllers is constituted by  
3    a distributed media gateway controller pair providing separate ingress and egress functions.

1    8.     (Currently Amended) [[A]]The communications network arrangement ~~as claimed in of~~  
2    claim [[7]]1, wherein at least one of said first and second media gateway controllers is  
3    constituted by a soft switch.

1    9. (Previously Presented) A system comprising:  
2        a computer; and  
3        a gateway address translator executable in the computer and for use in a communications  
4        network arrangement providing voice over IP or voice over ATM services and comprising a first  
5        media gateway controller configured to control a first gateway, wherein the first media gateway  
6        controller is provided with a first operating protocol, and wherein the communications network  
7        arrangement further comprises a second media gateway controller configured to control a second  
8        gateway, wherein the second media gateway controller is provided with a second, different  
9        operating protocol, the gateway address translator executable in the computer comprising:  
10            gateway proxies, one for each of said first and second gateways, and  
11            virtual gateways, one for each of said first and second media gateway controllers,  
12        wherein said gateway proxies provide a relay function for messaging between each of said first  
13        and second media gateway controllers and the corresponding one of the first and second  
14        gateways, and wherein said virtual gateways provide a virtual bearer function for messaging  
15        between said first and second media gateway controllers.

1    10. (Cancelled)

1    11. (Currently Amended) ~~A gateway address translator as claimed in The communications~~  
2        ~~network arrangement of claim [[8]]1, and incorporated in wherein~~ one of the first and second  
3        media gateway controllers ~~is provided as part of said computer.~~

1    12. (Currently Amended) A method of providing voice over IP or voice over ATM services  
2    in a communications network arrangement comprising a first media gateway controller  
3    controlling a first media gateway, and a second media gateway controller controlling a second  
4    media gateway, wherein the first media gateway controller is provided with a first operating  
5    protocol, and wherein the second media gateway controller is provided with a second, different  
6    operating protocol, the method comprising:

7                provisioning, by a gateway address translator executed in a computer, proxies of said first  
8    and second media gateways so as to provide a relay function for messaging between each of said  
9    first and second media gateway controllers and the corresponding one of the first and second  
10   media gateways, said messaging utilizing the first protocol between the first media gateway  
11   controller and the first media gateway, and utilizing the second protocol between the second  
12   media gateway controller and the second media gateway, and

13              providing, by the gateway address translator executed in the computer, a virtual bearer  
14   function for enabling messaging between said first and second media gateway controllers  
15   provided with respective ones of the first and second operating protocols.

1    13. (Currently Amended) A method of interfacing media gateway controllers and media  
2    gateways having different operating protocols in a communications network arrangement  
3    providing voice over IP or voice over ATM services, the method comprising:

4                creating providing, in a computer, proxies of said media gateways; and  
5                said proxies in the computer communicating with respective ones of said media gateway  
6    controllers utilizing respective ones of different operating protocols, wherein the media gateway  
7    controllers are provisioned with corresponding addresses of the proxies rather than  
8    corresponding addresses of said media gateways.

1    14. (Currently Amended) A communications network arrangement providing voice over IP  
2    or voice over ATM services, comprising:

3                 a plurality of media gateways and a plurality of computers comprising respective media  
4    gateway controllers configured to control the corresponding media gateways, wherein said media  
5    gateway controllers employ different operating protocols, wherein plural pairs of the media  
6    gateway controllers and media gateways are provided where each of the pairs includes one  
7    corresponding media gateway controller and one corresponding media gateway, and wherein  
8    communications between said media gateway and media gateway controller in each of the pairs  
9    includes communications using a corresponding one of the different operating protocols[[, and]];  
10   and

11                 a gateway address translator having proxies for respective ones of the media gateways,  
12    wherein the media gateway controllers are provisioned with corresponding addresses of the  
13    proxies rather than corresponding addresses of the media gateways.

1    15. (Previously Presented) A non-transitory machine-readable storage medium storing  
2    software to control delivery of voice over IP or voice over ATM services in a communications  
3    network arrangement comprising a first media gateway controller controlling a first gateway, and  
4    a second media gateway controller controlling a second gateway, wherein the first media  
5    gateway controller is provided with a first operating protocol, and the second media gateway  
6    controller is provided with a second, different operating protocol, the software upon execution  
7    performing:

8                 provisioning proxies of said first and second gateways so as to provide a relay function  
9    for messaging between each of said first and second media gateway controllers and the  
10   corresponding one of the first and second gateways utilizing the corresponding one of the first  
11   and second protocols, and

12                 providing a virtual bearer function for enabling messaging between said first and second  
13   media gateway controllers.

1 16. (Currently Amended) The communications network arrangement as claimed in claim  
2 1, wherein the first media gateway controller is provisioned with an address of a first one of the  
3 proxies instead of an address of the first media gateway, and wherein the second media gateway  
4 controller is provisioned with an address of another a second one of the proxies instead of an  
5 address of the second media gateway.

1 17. (Currently Amended) The gateway address translator as claimed in system of claim 9,  
2 wherein a first one of the gateway proxies is configured to communicate with the first media  
3 gateway controller using the first operating protocol, and a second one of the gateway proxies is  
4 configured to communicate with the second media gateway controller using the second operating  
5 protocol, wherein an address of the first gateway proxy rather than an address of the first  
6 gateway is provisioned at the first media gateway controller, and an address of the second  
7 gateway proxy rather than an address of the second gateway is provisioned at the second media  
8 gateway controller.

1 18. (Currently Amended) The method of claim 12, wherein the first media gateway controller  
2 is provisioned with an address of a first one of the proxies instead of an address of the first media  
3 gateway, and wherein the second media gateway controller is provisioned with an address of  
4 another a second one of the proxies instead of an address of the second media gateway.

1 19. (Currently Amended) The non-transitory machine-readable storage medium of claim 15,  
2 wherein the first media gateway controller is provisioned with an address of a first one of the  
3 proxies instead of an address of the first gateway, and wherein the second media gateway  
4 controller is provisioned with an address of another a second one of the proxies instead of an  
5 address of the second gateway.

1    20. (New) The communications network arrangement of claim 1, wherein in response to  
2 receiving the control message from said first media gateway controller, a first of said proxies is  
3 configured to:

4            substitute, in the control message, an address of said first media gateway controller with  
5 an address of the first proxy, and

6            forward the control message containing the address of the first proxy to the first media  
7 gateway.

1    21. (New) The system of claim 9, wherein a first of the gateway proxies is configured to:  
2 receive a first control message from the first media gateway controller,  
3 substitute, in the first control message, an address of the first media gateway controller  
4 with an address of the first gateway proxy,  
5 send the first control message containing the address of the first gateway proxy to the  
6 first gateway; and

7            wherein a second of the gateway proxies is configured to:  
8 receive a second control message from the second media gateway controller,  
9 substitute, in the second control message, an address of the second media gateway  
10 controller with an address of the second gateway proxy, and  
11 send the second control message containing the address of the second gateway proxy to  
12 the second gateway.

- 1    22. (New) The method of claim 12, further comprising:
  - 2        receiving, by a first of the proxies, a first control message from the first media gateway controller;
  - 4        the first proxy substituting, in the first control message, an address of the first media gateway controller with an address of the first proxy;
  - 6        the first proxy sending the first control message containing the address of the first proxy to the first media gateway;
  - 8        receiving, by a second of the proxies, a second control message from the second media gateway controller;
  - 10      the second proxy substituting, in the second control message, an address of the second media gateway controller with an address of the second proxy; and
  - 12      the second proxy sending the second control message containing the address of the second proxy to the second gateway.